

CA

110

Effect of carotene on growth and development of plants.
M. Kh. Chalakhyan (K.A. Timiryazev Plant Physiol.
Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 74, 381-4
(1950).—Introduction of carotene into *Chrysanthemum*,
Perilla, and *Rudbeckia* by means of application of carotene-
lanolin paste to cuts in plant stems (by leaf removal) (the
mixture contained 0.2% total carotene—15% of α -form, and
85% β -form) gave the following effects. In *Perilla* the
growth of the main stem was retarded, but side runners de-
veloped abnormally well; *Rudbeckia* gave similar results,
while *Chrysanthemum* showed decreased growth of the main
stem (lesser leaf tier spacing), as well as development of
thicker, stiffer, and darker-colored leaves. Use of powd.
saffron (rich in carotenoids) or of chlorophyll prepn. (from
stinging nettle) in expts. with *Chrysanthemum* gave results
similar to the above in the 1st case, but none in the 2nd in-
stance. The results are apparently caused by sensitization
of photoactivation of auxin-like substances in the plants,
which in turn alters the normal growth. G. M. K.

C. A.
1951

Bolton
TD

Effect of boron on development of plants lacking their roots. M. Kh. Chafakhyan (Timiryazev Plant Physiol. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 77, 1115-18 (1951).—*Rudbeckia bicolor* was grown in cultures containing traces of B, Mn, or Cu, after removal of root systems. With sufficient B intake the plants are capable of developing normal structures and forming normal flowers. Usual methods of B intake may not be sufficient under some circumstances, but infiltration through the leaves may be used for auxiliary method of B supply. B requirements may be connected with the adaptability of the plant to winter conditions; the plants with high B requirement are the plants requiring a long daylight period for proper development, while plants with lower B requirement are controlled by the B supply in early spring and do not begin to grow until the soil has thawed sufficiently to insure a steady supply of B, thus preventing too early growth and frost damage. G. M. Kozlov

GTASPL Vol. 5-No. 1 Jan. 1952

Chailakhyan, M. Kh. and Nekrasova, T. V. (K.A. Timiryazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences), The effect of light of luminescent lamps on the growth of lemon and orange seedlings, 807-10

Akademiya Nauk, S.S.S.R., Doklady Vol. 78, No. 4

GBS-L No. 45

Chailakhyan, M.Kh. and Nekrasova, T.V. (K.A. Timiryazev Institute of Plant Physiology,
U.S.S.R. Academy of Sciences), Early flowering of juvenile seedlings of citrus plants, 545-8

Akademiya Nauk S.S.S.R. Doklady Vol. 79 No. 3

1. CHAYLAKHYAN, M. Kh., NEKRASOVA, T. V.
2. USSR (600)
4. Citrus Fruits
7. Effect of the length of day and light intensity on the growth of citrus plants.
Dokl. AN SSSR 86, no. 4, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

CHAYLAKHYAN, M.Kh.

Relationship between photoperiodism and basic physiological processes in plants. Dokl. AN Arm. SSR, 16 no.4:109-115 '53.
(MIRA 9:10)

1. Chlen-korrespondent Akademii nauk Arayanskey SSR.
(Photoperiodism)

CHAYLAKHYAN, M.Kh.

CHAYLAKHYAN, M.Kh.; NIKRASOVA, T.V.

Overcoming polarity in lemon cuttings. Fiziol.rast. 1 no.1:65-
72 S-O '54. (MLRA 8:10)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akad.nauk
SSSR, Moscow

(Polarity (Biology)) (Lemon)

CHAYLAKHYAN, M. Kh.

Protein color reactions in plant leaves. M. Kh. Chaylakhyan (K. A. Timiryazev Inst. Plant Physiol., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 95, 415-18 (1984).—The biuret, xanthoproteic, and Millon and the ninhydrin tests were applied to leaves of pelargonium, tobacco, and cabbage for detn. of proteins after the leaves had been pretreated with boiling H_2O , treated with $EtOH$ to ext. the chlorophyll, rinsed with H_2O , and spread in dishes in which the color tests were run. Pelargonium and Hydrangeas gave pos. tests in all protein tests, somewhat greater amts. being noted in the green parts of the leaves. The protein tests in cabbage and tobacco leaves increase in intensity with illumination of the plant and indications are definite that the blue end of the spectrum is more conducive to protein synthesis than is the red end. These tests combined with the starch test can be used for rapid estn. of protein and starch content of leaves. G. M. K.

CHAYLAKHYAN, M. KH.

USSR/Physiology of Plants

Card 1/1

Authors : Chaylakhyan, M. Kh., and Nekrasova, T. V.

Title : Effect of girdling on the growth and development of lemon seedlings

Periodical : Dokl. AN SSSR, 96, Ed. 2, 403 - 406, May 1954

Abstract : Girdling is one of the horticultural methods of accelerating the blooming and the fruit bearing of young fruit seedlings. The transition of lemon seedlings into the blooming and fruit bearing stages can be attained in the 5th year of life or through incomplete girdling with preservation of a strip of the bark which connects the girdling or through complete girdling and protecting the cut with pure lanolin. Ten references. Table, drawing.

Institution : Academy of Sciences USSR, The K. A. Timiryazev Institute of Plant Physiology

Presented by : Academician A. L. Kursanov, March 10, 1954

Particularities of metabolism in leaves of vegetating and fruit-bearing grafts of lemons. M. Kh. Chailakyan and T. V. Nekrasova (K. A. Timiryazev Inst. Plant Physiol., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 96; 661-4(1954).—Leaves of the fruit-bearing branches of a grafted lemon contain more chlorophyll than do the leaves of the vegetating part of the plant; the peroxidase activity is also higher in the former leaves. There is less starch and more reducing sugars in the leaves of the grafted fruit-bearing part than in the vegetating part of the plant. Ascorbic acid level is lower in the leaves of the fruit-bearing part than in those of the vegetating part; total reducing power shows a similar variation.
G. M. Kosolapoff /

CHAYLAKHYAN, M. Kh.

**Development of winter plants grafted on spring forms. Fisiol.rast.
2 no.3:253-266 My-Je '55. (MIRA 8:11)**

**1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk
SSSR, Moscow
(Rape (Plant)) (Botany--Physiology)**

CHAYLAKHYAN, M. Kh.

✓ A study of the conditions of protein formation in leaves by means of color reactions. M. Kh. Chaylakhyan. *Izvest. Akad. Nauk Armyan. S.S.R. Biol. i Sel'skokhoz. Nauki* 8, No. 7, 24-33(1955)(in Russian; Armenian summary, 33-4).—The biuret, xanthoproteic, Millon, and ninhydrin reactions were tested in detecting the proteins in leaves. The color reactions are recorded on colored plates with a description of the methods used in each case. A discussion is also given on the effect of light on these reactions and on the formation of protein as obtained by the color reactions mentioned. J. S. Jeffe

CHAYLAKHYAN, M.Kh.: MEGRABYAN, A.A.

**On the selective bactericidal property of the root tissues of legumes
in regard to tuber bacteria. Dokl. AN Arm. SSR 20 no.3:99-104 '55.
(MLRA 8:7)**

- (Chaylakhyan)*
- 1. Chlen-korrespondent AN Arayanskoy SSR (for Megrabyan).**
 - 2. Sektor mikrobiologii Akademii nauk Arayanskoy SSR.
(Legumes—Diseases and pests) (Microorganisms)**

CHAYLAKHYAN, M. Kh.

Localization of starches and proteins in plant leaves in relation to differential photoperiodic interaction. AN Arm. SSR 21 nol: 37-42 '55. (MLRA 8:11)

1. Chlen-korrespondent Akademii nauk Arayanskoy SSR. 2. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR (Leaves) (Photoperiodism)

CHAYLAKHYAN, M. Kh.

USSR/ Agriculture - Plant physiology

Card 1/1 Pub. 22 - 46/52

Authors : Chaylakhyan, M. Kh.

Title : ~~Length of the day and its effect on the carbohydrate-albumin interchange in plant leaves~~
Length of the day and its effect on the carbohydrate-albumin interchange in plant leaves

Periodical : Dok. AN SSSR 100/2, 373-376, Jan 11, 1955

Abstract : Twelve different types of plants were investigated to determine how the length of the day affects the carbohydrate-albumin interchange of their leaves. The results obtained are listed. Twelve references: 2 USA, 7 USSR and 3 German (1918-1954). Table; illustrations.

Institution : Academy of Sciences USSR, The K. A. Timiryazev Institute of Plant Physiology

Presented by : Academician A. L. Kursanov, June 9, 1954

CHAYLAKHYAN, M.Kh.

Effect of the length of day on activity of oxidizing enzymes in plants. M. Kh. Chailakhyan and A. N. Boyarkin (K. A. Timiryazev Plant Physiol. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 105, 592-5 (1955).—Expts. with several varieties of tobacco, kidney bean, oats, cabbage, tomatoes, soybean, chrysanthemum, perilla, and millet showed that the activity of peroxidase and polyphenoloxidase varies during the day in the same direction in all parts of the plant. In a short day (short illumination period) the activity of peroxidase is higher than is the case in a long day; no such regularity is found in polyphenoloxidase activity. G. M. Kosolapoff

CHAYLAKHYAN, M. Kh

✓ 4164. Effect of nicotine acid and thiourea on vernalisation of winter varieties. M. Kh. Chailakhian and M. S. Kuznetsova. *Dokl. Akad. Nauk, S.S.S.R.*, 1955, 105, 842-845; *Referat. Zh. biol. Khim.*, 1956, Abstr. No. 12648.—It has been shown that $KMnO_4$, pyrogallol and H_2O_2 in a concn. of 0.05%, do not affect the vernalisation of winter rye or winter wheat. Thiourea and nicotinic acid in concn. of 0.01%; 0.05% and 0.1%; 0.5% accelerate the growth of the plants. The rôle of these two compounds in fermentation processes is explained. (Russian)

J. H. B. 100-1000

CHAYLAKHYAN, Mikhail Khristoforovich., doktor biologicheskikh nauk, professor;
STAROSTENKOVA, M.M., redaktor; GUBIN, M.I., tekhnicheskii redaktor.

[Photoperiodism in plants] Fotoperiodizm rastenii. Moskva, Izd-vo "Znanie," 1956, 38 p. (Vsesoiuznoe obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh znani. Ser.3, no.49) [Microfilm]
(MIRA 10:4)

(Plants, Effect of light on)

CHAYLAKHYAN, M.Kh.

Physiological state of cuttings from nonrooting plants and the effect
of growth-promoting substances. Izv.AN Arm.SSR. Biol. i sel'khoz.
nauki 9 no.9:39-50 S '56. (MLA 9:11)
(PLANT CUTTINGS) (GROWTH—PROMOTING SUBSTANCES)

CHAYLAKHYAN, M.Kh.

Ontogenesis and the integrity of the plant organism. Bot.zhur.
41 no.4:487-509 Ap '56. (MLRA 9:9)

1. Institut fiziologii rasteny imeni K.A.Timiryazeva Akademii
nauk SSSR, Moskva.
(Ontogeny (Botany)) (Vernalisation) (Photoperiodism)

Effect of vitamins on overcoming of polarity in lemon cuttings. M. Kh. Chalakyan and T. V. Nekrasova (K. A. Timiryazev Inst. Plant Physiol., Moscow). *Doklady Akad. Nauk S.S.S.R.* 111, 482-5 (1956).—Addn. of ascorbic acid or thiamine to heteroauxin aids more rapid rooting of lemon cuttings, as well as general growth with indication that these addends tend to overcome the normal polarity of the vertical plan of a plant. Cuttings planted upside down do not develop roots under the action of heteroauxin alone, but do so with added thiamin or ascorbic acid.

G. M. Kuznetsov.

U.S.S.R. ACADEMY OF SCIENCES, (U.S.S.R.)

✓Effect of vitamins on growth and development of plants:
M. Kh. Chakhyan (K. A. Timiryazev Inst. Plant Phys-
iol., Moscow). *Doklady Akad. Nauk S.S.S.R.* 111, 894-7
(1956).—Systematic and prolonged administration of as-
corbic acid, thiamine, and nicotinic acid to soybean plants
and rudbeckia tend to stimulate plant growth and somewhat
accelerate flowering. Vitamins C, B₁, and PP do not have a
specific action, but their effects are similar to the action of
KMnO₄, H₂BO₃, and thiourea, in changes of the oxidation-
reduction reactions in the plant. All these substances tend
to promote growth and accelerate the flowering.

G. M. Koslanoff

USSR / Plant Physiology. Growth and Development.

I-5

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72621.

Author : Chaylakhyan, M. Kh.

Inst : AS USSR.

Title : Ratio of Growth Processes and Generative Development in Higher Flowering Parasites and Host Plants.

Orig Pub: V. sh.: Pamyati akad. N. A. Maksimova. M., AN SSSR, 1957, 197-224.

Abstract: The perfect flowering parasites Orobanche cumana, O. ramosa and O. muteli, which develop on the roots of the sunflower, hemp, tobacco, perilla and mustard, are photoperiodically neutral. The stronger their growth, the longer the vegetative growth of their hosts. Male hemp plants are infected less often and more weakly than the female, due to a shorter developmental cycle. Graftings of shoots

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USSR / Plant Physiology. Growth and Development. 1-5

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72621.

Abstract: of other varieties have no influence on the susceptibility of the roots of the hosts to infection. The conclusion is drawn that the physiological processes which determine immunity to infection are localized in the roots. Bib. 40 titles. -- L. I. Krasovskiy.

Card 2/2

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CHAYLAKHYAN, M.K.; BAVRINA, T.V.

Effect of the length of the day on the pigment content of plant leaves [with summary in English]. Fisiol. rast. 4 no.4:312-321 (MLBA 10:9)
Jl-Ag '57.

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva Akademii nauk SSSR, Moskva.
(Photoperiodism) (Color of plants)

CHAYLAKHYAN, M.Kh.; KHLOPENKOVA, L.P.

**On the role played by leaves in the development of winter plants.
Dokl. AN SSSR 112 no.4:774-776 P '57. (MLBA 10:4)**

**1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii
nauk SSSR. Predstavleno akademikom A.L. Kursanovym.
(Leaves) (Rape (Plant))**

CHAYLAKHYAN, M. KH.

AUTHOR:

Chaylakhyan, M. Kh.,

20-6-44/47

TITLE:

Growth and Flowering of Plants as Affected by Gibberellines
(Vliyaniye gibberellinov na rost i tsveteniye rasteniy)

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1077-1080 (USSR)

ABSTRACT:

The investigations of the secretions of the fungus Gibberellines fuicuroi which causes the disease of "Durnyye potegi" (bad shoots) or "bakanaye" in the rice plant led to the determination of a new group of physiologically highly-active substances, the gibberellines (reference 10). Three of them are at present known: A₁ - C₁₉H₂₄O₆; A₂ - C₁₉H₂₆O₆ and A₃ or gibberellic acid C₁₉H₂₂O₆. All three are organic acids well soluble in water and are in a pure state upon a chromatographical column isolated from the fungus. The gibberellines strongly influence the growth and the morphogenic processes of the plants. In their action they differ from auxins and synthetic substances close to them. Especially the blossoming of the plants is influenced by them (reference 2-8, 11). In summer 1957 the author tested the influence of gibberellic acid upon the growth and the blossoming of the following plants: 1) Nicotiana silvestris, 2) Rudbeckia bicolor, 3) ornamental bean (Phaseolus multiflorus) and 4) oats "Pobeda" (Avena sativa), as plants of the long day; 5) tobacco "Mamont" (Nicotiana tabacum)

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Growth and Flowering of Plants as Affected by Gibberellines. 20-6-44/47

6) Perilla nankinensis, 7) soybean from Kharbin (Soja hispida), 8) Japanese millet (Panicum miliaceum), as plants of the short day; 9) winter rape (Brassica napus var. oleifera). The plants of the long day were cultivated under conditions of the short day, whereas the plants of the short day (together with winter rape) were cultivated under conditions of the long day. Half of the plants of every type was then placed into the conditions of the short, half of the plants of the other type into the conditions of the short day. Gibberelline was drop by drop put into the tip or the central part of the rosette. The results of the first test (June 6, table 1) show that the height growth of all plants under the influence of gibberelline was considerably increased. But tobacco "Mamont" and Perilla did not blossom under conditions of the long day. Table 2 (test no. 2, July 3) shows the results of the gibberelline influence under conditions of the unfavorable length of day. The following conclusions are to be drawn: 1) Plants of the long day, when exposed to conditions of the short day, under the influence of gibberelline in an overwhelming majority form stems; they blossom and bear fruit. 2) The winter forms and seedlings of biennial plants do the same under conditions which exclude a vernalizing action of the low temperatures. 3) The species of the

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Growth and Flowering of Plants as Affected by Gibberellines. 20-6-44/47

short day are under conditions of the long day and influence of gibberelline not capable of blossoming and bearing fruit. Thus gibberellines are no substances with a general influence which cause all plants to blossom. It is probable that their influence only in plants of the long day causes a chain of reactions which lead to the formation of substances necessary for blossoming. These substances should be the same in both groups of plants. But the above-mentioned reactions in plants of the short day are caused by other substances than gibberellines. There are 3 figures, 2 tables and 11 references, 1 of which is Slavic.

ASSOCIATION: Institute of Plant Physiology imeni K.A. Timiryazev AS USSR
(Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk SSSR)

PRESENTED: September 6, 1957, by A.L. Kursanov, Academician

SUBMITTED: September 5, 1957

AVAILABLE: Library of Congress

Card 3/3

GHAYLAKHYAN, Mikhail Khristoforovich; KURSANOV, A.L., akademik, otvetstvennyy
red.; PASEKOVSKIY, Yu.A., red.izd-va; GOLUBEVA, V.A., tekhn.red.

[Fundamental laws of the ontogeny of higher plants] Osnovnye zakono-
mernosti ontogeneza vysshikh rastenii. Moskva, Izd-vo Akad. nauk
SSSR, 1958. 77 p. (MIRA 11:6)

(Ontogeny (Botany))

AUTHOR: Chaylakhyan, M.Kh., Professor SOV/26-58-1-19/36

TITLE: Chemical Growth Stimulants and the Flowering of Plants
(Khimicheskiye stimulyatory rosta i tsveteniya rasteniy)

PERIODICAL: Priroda, 1958, Nr 1, pp 99-102 (USSR)

ABSTRACT: N.G. Kholodnyy and the Dutchman F. Vent, have worked out the hormone theory which demonstrates that physiologically active substances or growth hormones play a large role in the processes of growth and movement of plants. In the Sochi Experimental Station, Kholodnyy applied auxin mixtures to the shoots of fruit-bearing lemon trees. These shoots started flowering, while the tree itself was not in the vegetative period. The AS USSR Institute of Plant Physiology obtained a great stimulation of the growth of oat, millet, soybean, bean, tobacco, tomatoes by the application of a gibberilin solution for a period of 20 to 60 days, one drop a day. First steps towards general practical use of the experience

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Chemical Growth Stimulants and the Flowering of Plants SOV/26-58-1-19/36

gained from those experiments are under way.
There are 4 photos and 12 references, 4 of which are Soviet,
4 English, 1 Japanese, 1 Dutch and 2 German.

ASSOCIATION: Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR,
Moskva (Institute of Plant Physiology imeni K.A. Timiryazev,
AS USSR, Moscow)

Card 2/2

CHAYLAKHYAN, M. Kh.

KURSANOV, A.L.; CHAYLAKHYAN, M.Kh.; PAVLINOVA, O.A.; TURKINA, M.V.;
BROVCHENKO, M.I.

Translocation of sugars in grafted plants [with summary in English].
Fiziol. rast. 5 no.1:3-15 Ja-F '58. (MIRA 11:1)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR, Moskva.
(Plants, Motion of fluids in) (Grafting) (Sugars)

CHAYLAKHYAN, M.Kh.

The hormonal factors of plant flowering [with summary in English].
Fiziol.rast. 5 no.6:541-560 M-D ' 58. (MIRA 11:12)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR,
Moskva.

(Plants, Flowering of) (Hormones (Plants))

AUTHOR: Chaylakhyan, M.Kh., Professor

26-58-7-13/48

TITLE: The Effect of Vitamins on the Growth and Development of Higher Plants. (Vliyaniye vitaminov na rost i razvitiye vysshikh rasteniy)

PERIODICAL: Priroda, 1958, Nr 7, pp 67-72 (USSR)

ABSTRACT: Plants are not only vitamin suppliers for the animal and human organism but also depend essentially themselves on the effect of vitamins. The author, together with T.V. Nekrasova, carried out relevant experiments with carotin (Figure 1) and carotinoids or provitamin A (Figure 2) that proved the conclusions of N.G. Kholodnyy's hormonal theory with respect to the inactivation of the auxins, vitamins C (ascorbic acid) (Figure 3), B₁ (nicotinic acid) (Figure 4), and hetero-auxins (Figure 5). The experiments, also confirmed by foreign research, revealed the dependence of the plants on the vitamins in the processes of photosynthesis, photooxidation and respiration, oxidation-regeneration, ferment activities, general metabolism and transportation of substances, growth and development.
There are 5 photos and 23 references, 14 of which are Soviet, 4 English and 5 German.

Card 1/2

26-58-7-13/48

The Effect of Vitamins on the Growth and Development of Higher Plants

ASSOCIATION: Institut fiziologii rasteniy AN SSSR - Moskva (Institute of
Plant Physiology of the AS USSR - Moscow)

1. Plants--Growth 2. Vitamins--Effectiveness

Card 2/2

CHAYLAKHYAN, M.Kh.; MEGRABYAN, A.A.

Effect of root secretions of leguminous plants on the growth of
nodule bacteria. Izv. AN Arm.SSR. Biol. i sel'khoz.nauki 11
no.8:3-12 Ag '58. (MIRA 11:10)

1. Sektor mikrobiologii AN ArmSSR.
(MICRO-ORGANISMS, NITROGEN-FIXING) (RHIZOSPHERE MICROBIOLOGY)
(LEGUMINOSAE)

Chaylakhyan, M. Kh.

CHAYLAKHYAN, M.Kh.

Physiology of plant growth and development in the U.S.S.R. during
the last 40 years (1917-1957). Izv.AN SSSR Ser.biol. 23 no.1:59-70
Ja-F '58. (MIRA 11:1)

1.Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR.
(BOTANY—PHYSIOLOGY)

CHAYLAKHYAN, M.Kh.; MEGRABYAN, A.A.

~~The stimulating effect of leguminous plants on the growth of nodule~~
bacteria peculiar to them. Dokl. AN Arm. SSR 26 no.2:103-111
'58. (MIRA 11:5)

- 1.Chlen-korrespondent AN Armyanskey SSR (for Megrabyan).
- 2.Sektor mikrobiologii Akademii nauk Armyanskey SSR.
(Legumes) (Micro-organisms, Nitrogen-fixing)

CHAYLAKHYAN, M. Kh.

"The chemical stimulation of the growth and the blossoming of plants".

report presented at a Joint Session of the Biological Dept. of AN USSR and Biological and Medical Depts. AN Gruzziya SSR, Tbilisi, 28 Sept - 3 Oct 1957. Vestnik Akad. Nauk SSSR, 1958, Vol. 28, No. 1, pp. 121-125. (author Dzidzishvili, N. N.)

CHAYLAKHYAN, M. Kh.

"The Chemical Stimulation of the Growth and Blossoming of Plants."

report presented at the Congress of Biological Research in the Moldavian SSR
16-21 Sept 1957. Moldavian Branch AS USSR organized together with
VASKhNIL
Vestnik AN SSSR, 1958, V. 28, No. 1, p. 125-6 (author Kosenko, I. Ye.)

CHAYLAKHYAN, M.Kh.

Effect of gibberellins on plant growth and development [with
summary in English]. Bot. zhurn. 43 no.7:927-952 J1 '58.

(MIRA 11:9)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva Akademii nauk
SSSR, Moskva.

(Gibberellins)

CHAYLAKHYAN, M.Kh., prof.

Effect of vitamins on the growth and development of higher plants.
Priroda 47 no. 7:67-72 J1 '58. (MIRA 11:8)

1. Institut fiziologii rasteniy AN SSSR, Moskva.
(Plants, Effect of vitamins on)

AUTHOR: Chaylakhyan, M. Kh.

20-1-56/58

TITLE: Photoperiodic Susceptibility of Isolated Plant Leaves
(Fotoperiodicheskaya vospriimchivost' izolirovannykh list'yev rasteniy).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 197-200 (USSR)

ABSTRACT: There exists a divergence of views between Lona (reference 9) and Karr (reference 7) concerning the possibility to cause vegetating plants of the long day to blossom by ingrafted, photoperiodically induced leaves. According to Karr it is supposed that roots and, what was most important, the stem-bud meristem were present on pieces of stem in Lona's tests. Karr himself was not capable of causing plants to blossom with leaves cut off at the basis of the petiole. The author made tests with Perilla nancinensis, in order to determine these contractions. He repeated the experiments according to the methods by Lona and Karr, i.e. he took leaves with a piece of stem without buds (Lona variant) and with petiole alone (Karr variant). The leaves were for 24 hours with the cut surface immersed in a heteroauxin solution (100 mg per 1 Liter of water). The roots appearing in a (semi-strong) nutrient mixture by Knop were in half of the

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Photoperiodic Susceptibility of Isolated Plant Leaves

20-1-56/58

leaves carefully removed. In the leaves with piece of stem the occurring axillary buds were removed. All test leaves were set under the conditions of the short ten hours day. The control remained under normal conditions of the long day. The ingrafted leaves, as far as they had not died, in all cases caused the blossoming of the plants. The leaves of the long day had no such effect. The test results indicate that completely isolated leaves without roots and without meristem of the stem-buds are at an absence of mineral nutrition capable of receiving the photoperiodic influence and of accumulating specific substances necessary for the blossoming of plants. The contradiction between Lona and Karr is explained in the following manner: Lona (reference 9) is right when he concludes that the leaf-blade alone is sufficient for the photoperiodic induction by the short day. In order to prove this experimentally, he should have isolated leaf-blades with petioles. But Lona omitted this in his two works. Karr (reference 7) is right in his criticism of Lona's experiments. But in his tests he gave the leaves a much too short photoperiodic induction. Tests with budless plants are of minor importance. The proofs given here of

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Photoperiodic Susceptibility of Isolated Plant Leaves

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the above-mentioned ability of isolated leaves contradict the standpoint of Gregori (reference 8) who states that the substances in the stem-buds necessary for blossoming consist of pre-substances; these latter are allegedly supplied from the leaves. At the same time the author's tests confirm his statement earlier made (reference 3) that the substances necessary for blossoming are directly formed in the leaves of the plants.

There are 2 figures, 1 tables, and 10 references, 5 of which are Slavic.

ASSOCIATION: Institute for Plant Physiology AN USSR imeni K. A. Timiryazev (Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk SSSR)

PRESENTED: September 6, 1957, by A. L. Kursanov, Academician

SUBMITTED: September 5, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Chaylakhyan, M. Kh., Nekrasova, T. V. 20-119-4-56/60

TITLE: The Influence of Physidologically Active Substances in Overcoming Polarity in Lemon Cuttings (Vliyaniye fiziologicheskii aktivnykh veshchestv na preodoleniye polyrnosti u cherenkov limona)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 4, pp. 826-829 (USSR)

ABSTRACT: Such active substances as heteroauxine and α -naphthyl-acetic acid have made the passage of the polarity of organ formation in plant cuttings much more accessible, although not in all plants. In earlier experiments (Ref 1) only an addition of ascorbic acid or thiamine could cause an overcoming of the polarity. Therefore further active substances were tested. The data of table 1 show that among the subsequently mentioned substances without addition of ascorbic acid only α -naphthyl-acetic acid caused the root formation at the apical ends of the cuttings (figure 1). Heteroauxine and triiodo-benzoic acid cause big callus formation only. Gibberelline showed no effect, but has with half of the cuttings

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The Influence of Physiologically Active Substances in
the Overcoming of Polarity in Lemon Cuttings

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caused the formation of one well developed shoot each. With an admixture of ascorbic acid the influence of heteroauxine lead to an intensive root formation at the apical ends. Triiodo-benzoic acid acted neither alone nor with ascorbic acid upon such a root formation (figure 2). The action of α -naphthyl acetic acid upon heteroauxine + ascorbic acid was equal with regard to the number of formed roots. Gibberelline hampers normally orientated cuttings, because not roots, but calluses are formed (figure 3). Table 2 shows that Gibberelline as well as triiodo-benzoic acid hamper the root formation of the cuttings. By diminution of the concentration this influence becomes weaker. The conclusion is drawn that α -naphthyl acetic acid acts upon the polarity of organ formation in lemon cuttings exactly as strong as a mixture of heteroauxine + ascorbic acid, or heteroauxine + thiamine. Apparently this different influence of physiologically active substances upon the polarity of organ formation is connected with their different influence upon metabolism and substance-transport in the plants.

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The Influence of Physiologically Active Substances
in Overcoming Polarity in Lemon Cuttings

20-119-4-56/60

There are 3 figures, 2 tables, and 2 Soviet references.

ASSOCIATION: Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii
nauk SSSR (Institute of Plant Physiology imeni K.A.
Timiryazev AS USSR)

PRESENTED: December 27, 1957, by A.L. Kursanov, Member, Academy of
Sciences, USSR

SUBMITTED: December 27, 1957

Card 3/3

SOV/20-121-4-50, 51

AUTHORS: Krasil'nikov, A. A., Corresponding Member, Academy of Sciences, USSR, Chaylakhyan, M. Kh., Skryabin, G. K., Khokhlova, Yu. M., Ulezlo, I. V., Konstantinova, T. N.

TITLE: On the Stimulating Effect of Gibberellines of Different Origin
(O stimuliruyushchem deystvii gibberellinov razlichnogo proiskhozhdeniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 4, pp. 755-758 (USSR)

ABSTRACT: In recent years the gibberellines - new physiologically active substances - have drawn the attention of large circles of botanists and plant growers. They have a great influence on growth and development of plants as well as upon their different physiological manifestations and formation processes (Refs 5, 14). Gibberellines are obtained from the secretions of the fungus Fusarium moniliforme (sexual stage is Gibberella fujikuroi on rice). At the moment these substances are produced by special institutes in the USA (S. Sh. A.), England (Angliya) and Japan (Yaponiya). Among the substances produced by them the authors investigated most carefully a preparation obtained

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On the Stimulating Effect of Gibberellines of Different Origin

from the fungus Fusarium sp. which was isolated from a befallen vine. The fungus grows well on different culture media both in the case of simple synthetic and composed organic media. Its character and formation are briefly described. It differs from the race which is typical for Fusarium moniliforme. Differences are shown on figure 1. Fusarium sp. produced the active substance on the two following media: 1) MgCO_3 0,3 g, NaCl 0,2, KNO_3 1,0 g, FeSO_4 0,001 g, saccharosis 20 g, tap-water 1 liter. 2) (According to Stodola) NH_4Cl 3,0 g, KH_2PO_4 3,0 g, $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ 3,0 g, saccharosis (or glucose) 30 g, tap-water 1 liter. The isolation and purification of the active substance was carried out according to Stodola and others (Ref 13). The preparations Nr 1 and 2 were isolated. Nr 1 was more effective in the case of peas, cucumbers, maize, vetches and others than Nr 2 with respect to acceleration of growth and mass increase. The root system is not activated by any other preparation. The results of the main tests show (Figs 1, 2, Table 1) that the above mentioned preparation Nr 1 does not differ from

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On the Stimulating Effect of Gibberellines of Different Origin

gibberelline A₃ (by Professor Lang, Los Angeles) with respect to its effect. It was also impossible to find chromatographical differences. Only the chemical identification will prove whether the preparations Nr 1 and 2 are really gibberellines. There are 3 figures, 1 table, and 15 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow, State University imeni M. V. Lomonosov)
Institut fiziologii rasteniy im. K. A. Timiryazeva Akademii nauk SSSR (Institute of Plant Physiology imeni A. K. Timiryazev, AS USSR) Institut mikrobiologii Akademii nauk SSSR (Institute of Microbiology, AS USSR)

SUBMITTED: May 13, 1958

Card 3/4

17(1), 17(4)

AUTHORS:

Krasil'nikov, N. A., Corresponding Member, SOV/20-123-6-45/50
Academy of Sciences, USSR, Chaylakhyan, M. Kh., Aseyeva, I. V.,
Khlopenkova, L. P.

TITLE:

On a Gibberella-Like Substance Formed by Soil Yeasts (O
gibberellinopodobnom veshchestve, obrazuyemom pochvennymi
drozhzhami)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6,
pp 1124 - 1127 (USSR)

ABSTRACT:

The authors point out the stimulating effect exerted by the
gibberella preparation Nr 1 which had been isolated by them,
and by the pure gibberella A₃ on the growth of Rudbeckia
bicolor (Ref 2). Physical-chemical properties and chromato-
grams characterized the mentioned preparation Nr 1 as
gibberella A₃ or some compound related to it. The preparation
investigated in the present paper comes from Torula pulcherrima,
a yeast fungus that is especially prevalent in turf-bleaching
earths. It grows well in media without nitrogen with and
without addition of agar. On agar this yeast fungus forms

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On a Gibberella-Like Substance Formed by Soil Yeasts

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mucous, vaulted, semitransparent or transparent colonies deliquescing on the surface of the culture medium. Externally, they are very much like the colonies of *Azotobacter chroococcum*. *Torula* has very large (10—15 μ and even more) regularly globular cells (Fig 1). They propagate by gemmation, without spores. For their multiplication the liquid synthetic medium of Chapek was used. There, they grow best. After the medium has become turbid (15 - 20 days), the active substance is obtained as a powdery raw product by adsorption on charcoal and elution with organic solvents. The preparation obtained proved to be highly active and was tested in comparison with gibberella preparation Nr 1 as well as with chemically pure gibberella A₃ on rosette-like plants of *Rudbeckia bicolor*.

The preparation in the form of a 0.02% aqueous solution (content of active substance in one drop about 10 μ) was introduced dropwise into the center of the rosette or into the axil of an upper leaf of the plants. The controls developed water drops. Figures 2 and 3 as well as table 1 show that the physiological activity of gibberella A₃ (Fig 2:1) is equal to that of the preparation Nr 1 (Fig 2:2). The sample

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from *Torula* is but little inferior as to the growing of the stems by 5-6 days, as to the formation of flower buds and the bursting by 9-10 days. The plants on the *Torula* preparation (Fig 2:3, 3:1) are of more compact structure, since the stem is abundantly foliated, the leaves are of a deeper green, the internodes are shorter whereas the lateral shoots grow more regularly and are not so elongated. The controls remained always in the rosette stage (Fig 2:4, 3:2). This proves that gibberellins and their related substances are metabolites which are not specific for the *Fusarium* fungi alone, but are characteristic also of other microorganisms, in particular of soil-yeasts. There are 3 figures, 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) Institut fiziologii rasteniy im. K. A. Timiryazeva i Institut mikrobiologii Akademii nauk SSSR (Institute of Plant Physiology imeni K. A. Timiryazev and Institute of Microbiology of the Academy of Sciences, USSR)

Card 3/4

REYMERS, Fedor Eduardovich; CHAYLAKHYAN, M.Kh., prof., otv.red.;
VIKHMV, S.D., red.izd-va; ZENDEL', M.Ye., tekhn.red.

[Physiology of growth and development in bulb onions]
Fiziologiya rosta i razvitiia repchatogo luka. Moskva,
Izd-vo Akad.nauk SSSR, 1959. 334 p. (MIRA 12:9)

1. Chlen-korrespondent AN ArmSSR (for Chaylakhyan).
(Onions)

SOV/50-59-1-50/57

CHAYK, AKHYAN, M. Kh.

AUTHORS: Afrikyan, E. K., Kuchayeva, A. G., Candidates of Biological Sciences

TITLE: Use of Antibiotics in Plant Cultivation (Primeneniye antibiotikov v rasteniyevodstve)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr. 1, pp 142-143 (USSR)

ABSTRACT: A conference dealing with this subject took place in Yerevan from 8 to 13 October, 1958; it had been called by the Institut mikrobiologii Akademii nauk SSSR (Microbiological Institute of the Academy of Sciences USSR), the Vsesoyuznyy institut sel'skokhozyaystvennoy mikrobiologii VASKhNIL (All-Union Institute for Agricultural Microbiology of the VASKhNIL) and the Sektor mikrobiologii Akademii nauk Armyanskoy SSR (Department for Microbiology of the Academy of Sciences of the Armyanskaya SSR). Scientists who investigate antibiotic substances and their application to various fields of economy participated in the conference. It was the aim of the conference to systematize the collected material and to work out an effective method of application of antibiotics to plant cultivation. V. A. Ambartsumyan, President of the AS Armyanskaya SSR opened the conference. N. A. Krasil'nikov spoke about

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Use of Antibiotics in Plant Cultivation

the present state of the problem involved. Further reports were delivered by:

M. Kh. Chaylakhyan spoke about microbe metabolites which promote the development of higher plants.

N. M. Pidoplichko reported on investigations of several years' duration carried out by Ukrainian mycologists on soil fungus flora and its utilization in the fight against agricultural plant diseases.

V. I. Bilay, S. N. Moskovets dealt with the utilization of the fungus Trichoderma in fighting the diseases of cotton bushes, potatoes and some other agricultural breeds.

R. O. Mirzabekyan's report dealt with the excretions of actinomycetes which produce active antibiotics against the carriers of potato wart disease and diplodia in maize.

S. Orynbayev, V. N. Mazunina spoke about the utilization of the actinomycetes antagonists in fighting potato ring rot and mucous bacteria in cabbage.

G. M. Kublanovskaya reported on the effect of preparations from cultures of actinomycetes to prevent wilt of the cotton bush.

V. G. Tumanyan, E. K. Afrikyan, R. A. Bobikyan, Ye. T. Nikitina

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spoke about the successful utilization of several bacteria against diseases of vegetable cultures and potato wilt. Yu. M. Voznyakovskaya, O. G. Shirokov, A. D. Nalbandyan dealt with the utilization of epiphyte microflora in fighting several fungus diseases in plants.

D. M. Trakhtenberg, E. I. Rodionovskaya, L. P. Starygina, U. G. Oksent'yan mentioned results obtained in investigations of phytebacteriomycene as well as its utilization in fighting diseases occurring in cotton bushes and beans.

R. M. Galach'yan, Ye. P. Protzenko, A. G. Kuchayeva, B. A. Chelyshkina tried the effect of antibiotic preparations as tomatoes seed steepers against bacterial cankers in fighting diseases of decorative plants.

Ye. Ya. Rashba, K. I. Bel'tyukova described the investigation of plant antibiotics.

Z. E. Bekker, A. B. Silayev spoke about the production of the preparations "grizeoful'vin" and "trikhotetsin" and their effect on fungus carriers of diseases in cabbage, wheat and water melons.

A. G. Kuchayeva reported on results achieved in the utilization of antibiotics against unpaired silk moths.

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Use of Antibiotics in Plant Cultivation

V. P. Izrail'skiy, N. D. Buyanova, M. D. Kulikovskaya dealt with the formation of phytopathogen forms of bacteria resistant to antibiotics.

K. A. Vinogradova, N. S. Agre described a method of rapid determination of the effect of antibiotics on plants. The participants in the conference found the work carried out in this field in the USSR insufficient. The organization of an industrial production of antibiotics and microbe preparations for the purpose of their large-scale practical introduction in agriculture was pointed out as necessary. The necessity of an intensification of joint investigation of the growth stimuli and the development of plants of microbial origin was further pointed out. The importance of coordination of work for purposes of research and utilization of antibiotics in plant breeding was emphasized as well as the holding of periodical conferences dealing with this problem.

Card 4/4

CHAYLAKHYAN, N.Kh.

Effect of vitamins on the growth and development of the
higher plants. Vitaminy no.4:172-179 '59. (MIRA 12:9)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva Akademii
nauk SSSR, Moskva.

(PLANTS, EFFECT OF VITAMINS ON)

CHAYLAKHYAN, M.Kh.; AKSENOVA, N.P.

Relation between photoperiodism and respiration in plants. *Fiziol.*
rast. 6 no.6:699-708 M-D '59. (MIRA 13:4)

1. K.A.Timiriasev Institut of Plant Physiology, U.S.S.R. Academy
of Sciences, Moscow.
(Photoperiodism) (Plants--Respiration)

CHAYLAKHYAN, M.Kh.

Effect of gibberellins and nucleic substances on the growth and
flowering of plants. Izv.AN Arm.SSR. Biol.nauki 12 no.11:3-13
N '59. (MIRA 13:5)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii
nauk SSSR.

(GIBBERELLINS) (NUCLEIC ACID) (GROWTH (PLANTS))

CHAYLAKHYAN, M.Kh.

Moving forces in the development of plant organisms. Biol.MOIP.
Otd.biol. 64 no.1:61-77 Ja-F '59. (MIRA 12:7)
(Botany--Physiology) (Science--Philosophy)

CHAYLAKHYAN, Mikhail Khristoforovich, prof.; STAROSTENKOVA, M.M., red.;
SAVCHENKO, Ye.V., tekhn.red.

[K.A.Timiriazov, scientist, fighter, and thinker] Timiriazov -
uchenyi, borets, myslitel'. Moskva, Izd-vo "Znanie," 1960.
29 p. (Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh
i nauchnykh znaniy. Ser.8, Biologiya i meditsina, no.11).
(MIRA 13:7)
(Timiriazov, Kliment Arkad'evich, 1843-1920)

CHAYLAKHYAN, M.Kh.

Regularities of ontogenesis and physiology of flowering in higher plants. Izv.AN SSSR. Ser.biol. no.2:206-229 M-Apr '60.

(MIRA 13:6)

1. Institute of Plant Physiology, Academy of Sciences of the U.S.S.R., Moscow.

(ONTOGENY (BOTANY)) (PLANTS, FLOWERING OF)

CHAYLAKHYAN, M. Kh.; KRASIL'NIKOV, N.A.; KUCHAYEVA, A.G.; IVANOV, K.I.;
KHLOPENKOVA, L.P.; ASHKEVA, I.V.; KRAVCHENKO, B.F.

Gibberellin production and the determination of its physiological activity in connection with its use in plant cultivation.
Fiziol.rast. 7 no.1:112-120 '60. (MIRA 13:5)

1. K.A. Timiriazov Institute of Plant Physiology and
Microbiology Institute of U.S.S.R. Academy of Sciences, Department of Soil Biology of Moscow State University, Moscow,
and Kurgan Plant of Medicine Preparations, Kurgan.
(Gibberellin)

CHAYLAKHYAN, M.Kh.; KOCHANOV, V.G.; ZAMOTA, V.P.

Effect of gibberellin on the growth and yields of hemp and tobacco. *Fiziol.rast.* 7 no.3:340-343 '60.
(MIRA 13:6)

1. K.A. Timiryazev Institute of Plant Physiology, U.S.S.R.
Academy of Sciences, Moscow.
(Gibberellins) (Hemp) (Tobacco)

CHAYLAKHYAN, M.Kh.; LOZHENIKOVA, V.N.

Gibberellinlike substances in higher plants and their effect
on growth and flowering. *Fiziol. rast.* 7 no. 5:521-530
'60. (MIRA 13:10)

1. K.A. Timiriasev Institute of Plant Physiology, U.S.S.R.,
Academy of Sciences, Moscow.
(Gibberellins)

CHAYLAKHYAN, M.Kh.

Interaction of plant organs in the induction of flowering. Izv. AN
Arm. SSR. Biol. nauki 13 no.6:3-12 Je '60. (MIRA 13:8)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk
SSSR.

(PLANT PHYSIOLOGY)

CHAYLAKHYAN, M.Kh.

Photoperiodic sensitivity of plants deprived of stems and roots.
Dokl. AN SSSR 135 no.1:213-216 N°60. (MIRA 13:11)

1. Institut fiziologii rasteniy im.K.A.Timiryazeva AN SSSR.
Predstavleno akademikom. A.L.Kursanovym.
(Photoperiodism)

CHAYLAKHYAN, M.Kh.; KHLOPENKOVA, L.P.

Factors governing stem growth in the rosette forms of long-day species. Dokl. AN SSSR 135 no.2:482-485 N '60. (MIRA 13:11)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR.
Predstavleno akademikom A.L.Kursanovym.
(Growth (Plants))

CHAYLAKHAYAN, M.Kh.; KONSTANTINOVA, T.N.

Effect of anaerobiosis on photoperiodism in plants. Dokl. AN SSSR
135 no.6:1539-1542 D '60. (MIRA 13:12)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk
SSSR. Predstavleno akademikom A.L. Kursanovym.
(Photoperiodism) (Plants, Effect of oxygen on)

CHAYLAKHYAN, M. KH. (USSR)

"Significance of Gibberel lins in the Development of Spring
and Winter Forms of Plants."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

TURETSKAYA, Rakhil' Khaimovna; CHAYLAKHYAN, M.Kh., otv. red.; IVANOV, V.P.,
red. izd-va; POLYAKOVA, T.V., tekhn. red.

[Growth stimulators and the physiology of root formation in plant
cuttings] Fiziologiya korneobrazovaniia u cherenkov i stimulatory
rosta. Moskva, Izd-vo Akad. nauk SSSR, 1961. 279 p. (MIRA 14:9)

1. Chlen-korrespondent AN Armyanskoy SSR (for Chaylakhyan).
(Plant cuttings) (Growth promoting substances)

CHAYLAKHYAN, M.Kh.; BUTENKO, R.G.; LYUBARSKAYA, I.I.

Effect of nuclein metabolism derivatives on the growth and flowering
of *Perilla nankinensis*. *Fiziol. rast.* 8 no.1:101-113 '61.

(MIRA 14:3)

1. K.A. Timiriasev Institute of Plant Physiology, U.S.S.R. Academy of
Sciences, Moscow.

(Plants, Flowering of) (Nuclein)

CHAYLAKHYAN, M.Kh.; TURETSKAYA, R.Kh.; KLYUSHKINA, N.S.

Interaction of physiologically active substances in plant cuttings
during the formation and growth of roots and stems. Fiziol.rast.
8 no.5:601-612 '61. (MIRA 14:10)

1. Timiriasev Institute of Plant Physiology, U.S.S.R. Academy
of Sciences, Moscow.

(Growth promoting substances) (Growth inhibiting substances)
(Plant cuttings)

MNDZHOYAN, A.L.; CHAYLAKHYAN, M.Kh.; MARSHAVINA, Z.V.

Effect of some indole derivatives on root formation in plants.
Izv. AN Arm. SSR. Biol. nauki 14 no.3:3-7 Mr '61. (MIRA 14:3)

1. Institut tonkoy organicheskoy khimii AN ArmSSR.
(INDOLE) (GROWTH PROMOTING SUBSTANCES)

CHAYLAKHYAN, M.Kh.; SARKISOVA, M.M.; KOCHANKOV, V.G.

Effect of gibberellin on the fruit bearing of grapevines in
Armenia. Izv. AN Arm. SSR. Biol. nauki 14 no.12:39-54 D '61.
(MIRA 15:3)

1. Institut vinogradarstva, vinodeliya i plodovodstva
Ministerstva sel'skogo khozyaystva Armyanskoy SSR i Institut
fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR.
(ARMENIA—GRAPES)
(GIBBERELLIN)

CHAYLAKHYAN, M.Kh.; KOCHANKOV, V.G.

Effect of gibberellin on growth and flowering of ornamental plants.
Izv. AN SSSR. Ser. biol. 26 no.1:3-12 Ja-F '61. (MIRA 14:3)

1. Timiriasev Institute of Plant Physiology, Academy of Sciences
of the U.S.S.R., Moscow.
(GIBBERELLINS) (PLANTS, ORNAMENTAL)

CHAYLAKHYAN, M.Kh.; KHLOPENKOVA, L.P.

Comparative data on the physiological activity of various gibberellin preparations. Izv. AN SSSR. Ser. biol. 26 no.1:87-92 Ja-F '61.
(MIRA 14:3)

1. Timiryazev Institute of Plant Physiology, Academy of Sciences of the U.S.S.R., Moscow.

(GIBBERELLINS)

BUTENKO, R.G.; CHAYLAKHYAN, M.Kh.

Effect of derivatives of nuclein metabolism on the growth and
flowering of the morining-glory (Pharbitis nil Chois.). Dokl.
AN SSSR 141 no.5:1239-1242 D '61. (MIRA 14:12)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR.
Predstavleno akademikom A.L. Kursanovym.
(Plants, Flowering of) (Photoperiodism)
(Protein metabolism)

CHAYLAKHYAN, M.Kh.; KHILOPENKOVA, L.P.

Effect of growth substances and nuclein metabolism derivatives on
the growth and flowering of plants induced by photoperiods. Dokl.
AN SSSR 141 no.6:1497-1500 D '61. (MIRA 14:12)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR.
Predstavleno akademikom A.L.Kursanovym.

(Growth promoting substances) (Growth inhibiting substances)
(Nuclein) (Photoperiodism)

TURETSKAYA, Bakhil' Khaimovna; CHAYLAKHYAN, M.Kh., prof., otv. red.;
PASHKOVSKIY, Yu.A., red. izd-va; YEPIFANOVA, L.V., tekhn.
red.

[Instructions for the use of growth promoting substances in
the vegetative propagation of plants]Instruktsiia po primeneniiu
stimulatorov rosta pri vegetativnom razmnozhenii rastenii. Mo-
skva, Izd-vo Akad. nauk SSSR, 1962. 69 p. (MIRA 16:2)

1. Chlen-korrespondent Akademii nauk Armyanskoy SSR (for
Chaylakhyan).
(Growth promoting substances) (Plant cuttings)

CHAYLAKHYAN, M.Kh.; LOZHNKOVA, V.N.

Gibberellinlike substances and vernalization of plants. Fiziol.
rast. 9 no.1:21-31 '62. (MIRA 15:3)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy
of Sciences, Moscow.

(Vernalization) (Gibberellins)

CHAYLAKHYAN, M.Kh.; KONSTANTINOVA, T.N.

Effect of aeration conditions on the photoperiodic reaction
in plants. Fiziol. rast. 9 no.6:693-702 '62. (MIRA 15:12)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R.
Academy of Sciences, Moscow.

(Photoperiodism)

(Plants, Effect of oxygen on)

CHAYLAKHYAN, M.Kh.; VARSEGYAN, S.G.; NUBARYAN, F.M.; KOCHANKOV, V.G.

Effect of gibberelin on the growth and yield of tobacco in connection with the dates of treatment. Izv. AN Arm. SSR. Biol. nauki 15 no.2:3-11 '62. (MIRA 15:3)

1. Institut semledeliya Ministerstva sel'skogo khozyaystva Armyanskoy SSR i Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR.

(TOBACCO)
(GIBBERELLINS)

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